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ABSTRACT

Prompted by the belief that the noncomparative responses used in earlier studies did not provide accurate and objective measures of cable television subscriber preferences, a study was conducted to investigate subscriber preferences for new program services using a paired-comparison technique. Approximately 400 subscribers in a midwestern city were mailed brief descriptions of seven program services in the areas of sports, news, music, children's programing, cultural programing, classical films, and adult films. Following the descriptions were 21 pairs of services formed from the seven mentioned. Respondents were asked to select one service from each pair based on the descriptions and on any prior information they might have about the type of service. The results showed that preferences varied widely across demographic variables. The study suggests that the paired-comparison technique might be particulary helpful when used in conjunction with other preference measurement methods. (A copy of the questionnaire format is included.) (FL)

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The Measurement of Cable Television Program Service Preferences

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Abstract

The present study investigated cable television subscriber preferences for new program services. It was argued that preference measures used in earlier studies which used noncomparative response approaches failed to provide objective and accurate measures of subscriber preferences. In this study, measures based on Thurstone's law of comparative judgment were developed and administered to a sample of 374 cable subscribers in Bloomington, Indiana. The comparative approach developed for this study has distinct advantages over simple ranking and absolute rating techniques because the "distance" between program preferences can be represented on a unidimensional interval scale. Program service preferences were shown to vary widely across demographic variables, such as age, gender, education, and subscribership to pay-cable program services. The implications for this method of community franchise authorities as well as individual cable operators was discussed.

The successful growth of the cable television industry has led to a fierce competition for cable franchises in major markets across the U.S. and refranchises in smaller markets cabled in the Sixties. Cable now reaches 37% of all U.S. television households, and by 1990, cable penetration may exceed 55%. The success of cable television and the need for local authorities to compare similar, competitive franchise proposals have led some local governing bodies to consider subscriber demand when deciding between prospective franchisees. Crucial questions are: What does the community want? How much are individuals willing to pay for what they want? How well does each prospective franchisee satisfy measured demand?

Research concerning the viewing preferences of the cable television audience is rather scarce. Estimating the demand for a novel service and the expected audience for an innovative program type is a difficult process at best. And while nearly everyone agrees that cable television warrants more research, few agree as to the best way to collect the data. Yet with the increasing trend toward cable advertising, there is pressure on cable operators to identify audience preferences for particular program services. As different types of services become more available and as more cable systems increase their channel capacity, consumer demand analyses become all the more essential.

Recently, many cable operators have realized the need for viewer program service preference data. Market research and media consulting firms are now being employed by many cable systems to assess audience demand for pay services. Specific marketing strategies for individual pay services have become essential due to the unpredictability and instability of the pay-TV subscriber. A recent Benton and Bowles study

found that nearly 21% of current or previous cable subscribers have cancelled one or more pay services for reasons other than change in residence (Broadcasting, p. 50). This high rate of "churning" is causing a bit of uneasiness in those who are spending millions of dollars producing and distributing cable services for which no long-term demand has been established.

The few studies that have addressed questions of consumer demand for cable services have mostly focused on predicting cable penetration in a new market. These studies have generally formulated linear models predicting cable subscribership based on a number of demographic and structural variables. Park (1972) specified a model with predictors such as subscriber fee, strength and availability of local and distant signals, proximity to the market center, and household income. Collins, Reagan, and Abel (1982) created a similar model of cable penetration that went beyond Park's model to include variables related to the household's media use and other demographic and structural variables, such as length of residence, type of residence, home ownership, and education. These models, however, are designed to predict cable subscription in a new market; they do not inform us about consumer preferences for specific program services.

A study conducted by the Mitre Corporation (1972) using a frame-of-reference approach, attempted to estimate consumer interest in a proposed cable system in Washington, D.C. The purpose of the survey which involved 248 heads-of-household was "to determine the incremental demand for different types of programming and new services as a function of the size of the subscriber fees that would be charged." (Mitre, p. V-11) Initially, respondents were asked to stipulate how much they would be willing to pay for cable service to improve reception of off-air signals.

Then they were given brief descriptions of seven program or consumer services and were asked to express whether they would be interested in each service. Respondents, under these conditions, expressed a great deal of interest in all services--even one dealing with video shopping aids, a service that in practice has been far from successful. They also reported relatively high dollar amounts for the monthly fees they would be willing to pay--the average being around $20 a month.

The Mitre Corporation also employed a method similar to a focus group in Reston, VA. to assess consumer interest in cable services. They gathered together representatives of government, industry, and educational institutions, all familiar with the cable TV industry, and presented to them demonstrations of different program offerings and consumer services. These services ranged from home burglar alarms to instructional packages. Interest, in this case, was also very high for most services, yet the fees these respondents were willing to pay were quite a bit lower than those estimated in the general survey. Whereas a $20 subscription fee would attract approximately 55% of the respondents in the general survey, in the study involving demonstrations to invited guests, the same $20 would attract only about 20% of the focus group sample.

The Mitre studies used a response approach that is typical of many demand analyses. The frame-of-reference structured interview and focus group approaches generally require respondents to give responses based upon their preference for a single object or activity in isolation. This non-comparative approach to eliciting expressions of sentiments is neither recommended nor realistic. As Nunnally (1978) points out, expressions of sentiment, such as program preferences, are inherently comparative. He states, "Subjects tend to anchor their responses in terms

of (1) stimuli of the same kind they have experienced in the past and (2) the range of stimuli in the set which is presented." (Nunnally, p. 45)

The non-comparative approach forces the respondent into an ambiguous situation where he has to muster his own comparative anchors. It also can lead to an overestimation of respondent interest. As the Mitre report points out, what people claim they are willing to pay and what they would actually pay given the opportunity may be entirely different. The problem is not necessarily that people lie about their interests or desires, but that the expression of preference in an absolute response approach is not situated in a typical comparative and discriminatory context. Given a real-life situation where one makes a choice based on available alternatives, expressions of preference are likely to be much different. This discrepancy may be augmented, in the case of the Mitre survey, due to the rather brief and vague program descriptions respondents were provided.

Few studies examining television program preferences in general have utilized methods involving comparative judgments. Porter (1959) used a paired-comparison technique to assess the program preferences of a broadcast television audience. Porter had respondents evaluate the twenty top programs for a six month period as ranked by the American Research Bureau. Each program was paired once with each other program and the respondent indicated for each pair which program he preferred. When these comparative rankings were compared with the A.R.B. rankings the correlation coefficient between them was .83 $\pm$ .07. Both sets of data were found to be highly reliable using the split-half technique. The principal weakness in Porter's study was the fact that the evaulation of 20 programs produced 190 paired-comparisons, resulting in a tremendous burden for the respondent.

Monaghan et al. (1974) also recognized that decision-making--even concerning new television program concepts--is based on comparative relations between stimuli. Monaghan et al. used Q-sorts to predict viewer preferences for new program ideas. This technique was selected so that the viewer could "express his preference for one program in relation to all other available programs, rather than merely expressing a degree of like or dislike for each program separately." (Monaghan et al.; p. 133-34). However, instead of examining the program types that were preferred, Monaghan et al. focused their attention on the determination of specific viewer types.

Both of these studies make important points about the nature of broadcast televiewer decision-making processes. The notion of comparative judgments in the expression of sentiments is even more relevant to pay-TV subscription preferences where, in contrast to broadcast television, an actual purchase of a program service is made. This makes a comparative approach attractive for the assessment of subscriber demand.

A Comparative Measure of Program Service Preferences

Thurstone (1927) first considered how psychological discriminations between objects can be objectively measured. In developing the "law of comparative judgments," he proposed a method of scaling based on a systematic series of paired comparisons. Underlying this method of scaling is the notion that people are (1) poor judges of the absolute magnitude of psychological and perceptual attributes, and (2) rarely required to make absolute judgments in daily life (c.f., Nunnally, 1978). For example, in psychophysics it has been shown that independent judgments of magnitude (i.e., absolute judgments) are inferior to comparative judgments. This

principle is well illustrated by the measurement procedure used to determine the proper strength of eye glasses. Rather than simply ask people to rate their satisfaction with the corrective ability of a particular lens on an absolute scale of, say, one to ten, judgments are typically based on pairwise comparisons of two lenses at a time.

As Torgerson (1958) points out:

> The observer cannot report directly the value of the discriminal process on the psychological continuum . . . We can, however, deduce equations relating judgments of relations among stimuli (which the observer can make) to the scale values and dispersions of the stimuli on the psychological continuum. (pp. 157-58)

The notion of dispersion is particularly important in the law of comparative judgments. The law takes into account the fact that judgments about psychological attributes (such as preference) will not only vary between individuals but within given individuals over repeated observations. This variance in an individual's judgment about a particular stimulus is defined as the discriminal dispersion of that stimulus. Each stimulus evaluated on the psychological continuum can be shown to have scale values defined by the value of its modal discriminal dispersion. Given this kind of variability, it follows that if two stimuli are paired in a manner such that the observer is asked to judge which stimulus possesses more of the psychological attribute in question (preference, magnitude, etc.) over repeated observations, a distribution of differences between the two stimuli is generated. The mean of this distribution of differences can be shown to equal the difference in the scale values of the two stimuli on the dimension representing the psychological attribute in question (Torgerson, 1958). It follows that the greater the distance between any two stimuli on the dimension representing the psychological attribute, the greater the proportion of times one stimulus was judged to have more of the attribute in question (McIver and Carmines, 1981).

These proportions can be directly translated into scale values based on unit normal deviates by introducing two simplifying assumptions: (1) the correlations between discriminal distributions are zero, and (2) the standard deviations of the discriminal distributions are all equal (Nunnally, 1978). Consequently, the actual data required to apply the law of comparative judgments is "the proportion of times any stimulus k is judged greater than any other stimulus j" (Torgerson, 1958). Scale values are then derived by converting these proportions into unit normal deviates (areas under the unit normal curve) and then finding the average of the unit normal deviates associated with each stimulus across all pairings. The resulting scale values have the properties of an interval level scale of the psychological attribute of interest. One of the main advantages of an interval level scale is the fact that the distances between stimuli along the continuum are directly interpretable. Using this approach for the assessment of consumer preferences for cable services would provide an estimation of the degree to which one service is preferred over another.

The present study asked subcribers to select between all possible pairs of seven different cable television program services to determine which services were most preferred. By systematically matching the different services in this manner, it was anticipated that a highly reliable and unbiased scale of program service preferences could be developed. This approach has distinct advantages over simple ranking and absolute rating techniques because the relative "distance" between program preferences can be represented on a unidimensional interval scale based on repeated ratings of each program service by each respondent.

Study Design

Sample

A systematic random sample of 603 cable subscribers was drawn from the subscription list of Horizon Telecommuniations of Bloomington, Indiana, in mid-October, 1982. Each subscriber was mailed a questionnaire, an individually addressed cover letter, and a pre-paid return envelope. Respondents were assured of complete confidentiality of their responses. A total of 258 subscribers responded to this initial mailing (43% response rate). On November 5, 1982, a second questionnaire, cover letter, and pre-paid return envelope were mailed to the 345 subscribers in the sample who failed to respond to the initial mailing. Subscribers not responding within three weeks were subsequently contacted by telephone, if possible, and asked to complete the questionnaire. An additional 138 subscribers responded to this follow-up contact. A total of 386 questionnaires were returned, yielding a response rate of 64% for the study. Twelve of the questionnaires were not sufficiently complete to be used in the analysis.

Measurement of Program Service Preferences

Respondents were provided brief, written descriptions of the following seven program services: news, sports, music, children's, cultural, classic film, and adult film channels. These descriptions were generic in nature, and no specific names of actual services were mentioned (see Figure 1). The respondent was informed that each of the services might be available to them if their cable system were to expand to thirty or more channels.

Following the program service descriptions were 21 pairs of services formed from the seven mentioned above. The respondent was asked to select one service as preferred from each pair based on the provided descriptions and any other prior information he might have.

FIGURE 1

Questionnaire Format For Assessing Cable Television Program Service Preferences

Cable television program services are expanding rapidly. Listed below are some of the new program services that might be available if our cable system expands to 30 channels.

ALL NEWS	24-hour cable news service providing around-the-clock coverage of national and world news.
SPORTS	All-sports cable network offering a variety of sporting events and highlights from around the world.
MUSIC	Cable channel devoted to popular music. Features special video productions, concert tapes, music news, and interviews with musical artists.
CHILDREN'S	Cable channel devoted to programs and films appealing to children.
CULTURAL	Cable channel devoted to theatrical presentations, classical music, opera, ballet, modern dance, and interviews with literary figures.
CLASSIC FILM	Cable channel devoted to the presentation of a wide range of classic motion pictures from all eras.
ADULT FILM	Cable channel devoted to the presentation of American and foreign motion pictures dealing with adult themes.

Using the general descriptions given above and what you may already know about these new program services, select one service from EACH of the following pairs that you would prefer. Please take care to make a choice for all of the pairs listed.

Would you prefer ...

a. ☐ NEWS or ☐ SPORTS
b. ☐ ADULT FILM or ☐ MUSIC
c. ☐ CLASSIC FILM or ☐ CHILDREN'S
d. ☐ CULTURAL or ☐ NEWS
e. ☐ MUSIC or ☐ SPORTS
f. ☐ CHILDREN'S or ☐ ADULT FILM
g. ☐ CULTURAL or ☐ CLASSIC FILM
h. ☐ NEWS or ☐ MUSIC
i. ☐ SPORTS or ☐ CHILDREN'S
j. ☐ ADULT FILM or ☐ CULTURAL
k. ☐ CLASSIC FILM or ☐ NEWS

Would you prefer ...

l. ☐ CHILDREN'S or ☐ MUSIC
m. ☐ CULTURAL or ☐ SPORTS
n. ☐ CLASSIC FILM or ☐ ADULT FILM
o. ☐ NEWS or ☐ CHILDREN'S
p. ☐ MUSIC or ☐ CULTURAL
q. ☐ SPORTS or ☐ CLASSIC FILM
r. ☐ ADULT FILM or ☐ NEWS
s. ☐ CHILDREN'S or ☐ CULTURAL
t. ☐ MUSIC or ☐ CLASSIC FILM
u. ☐ SPORTS or ☐ ADULT FILM

The procedure for ordering the paired-comparisons was taken from Ross (1934). Ross' method of optimum balanced orders allows for the greatest possible spacing between pairs involving identical members and avoids conspicuous repetitions of an item that may influence judgment. Ross' tables for balanced orders provided the systematic ordering of the seven program services. Thus, each program service was paired once with each other program service with the maximum amount of space between each successive appearance of an item.

Results

Table 1 shows the raw proportions associated with each program service pairing and the average proportion associated with each of the seven program services. For example, reading down column one in the table shows that 84 percent of the respondents indicated that they would prefer a news channel over a children's channel. Inspection of the column titled "Classic Film" shows that 60 percent of the subscribers would prefer a classic film channel over a news channel. The average preferences indicate the extent to which each of the seven program services was preferred over the other six alternatives. Table 1 shows that overall preference for classic film program services in the highest (62%) and preference for children's program services is the lowest (26%).

(INSERT TABLE 1 ABOUT HERE)

The line graph immediately below Table 1 is a transformation of the raw preferences into a standardized scale (unit normal deviates) that takes into account the probability associated with proportions of various sizes.

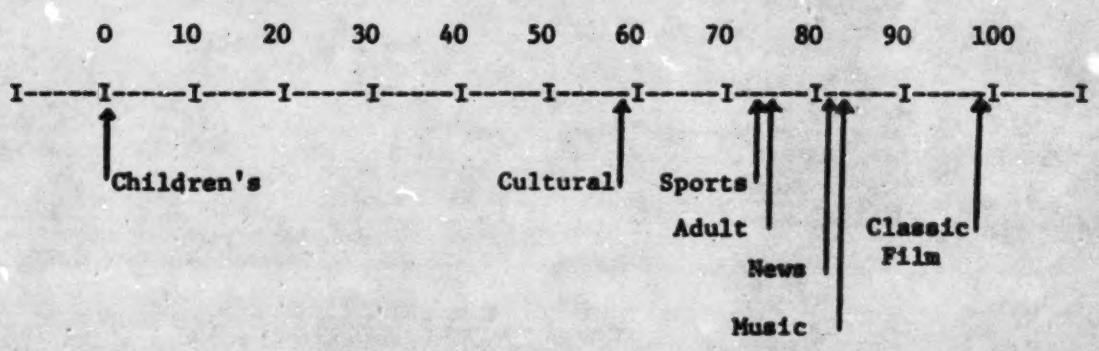
TABLE 1

MATRIX OF PROGRAM SERVICE PREFERENCES

ALL RESPONDENTS

Over . . .	Proportion that prefer . . .						
	News	Sports	Music	Children's	Cultural	Classic Film	Adult Film
News	---	.44	.46	.16	.48	.60	.51
Sports	.56	---	.54	.27	.44	.55	.50
Music	.54	.46	---	.20	.36	.55	.49
Children's	.84	.73	.80	---	.75	.84	.73
Cultural	.52	.56	.64	.26	---	.71	.54
Classic Film	.40	.45	.45	.16	.29	---	.44
Adult Film	.49	.50	.51	.27	.45	.56	.50
Average Preference	.55	.52	.56	.26	.47	.62	.53
Rank	(3)	(5)	(2)	(7)	(6)	(1)	(4)

Standardized Scale of Program Preferences

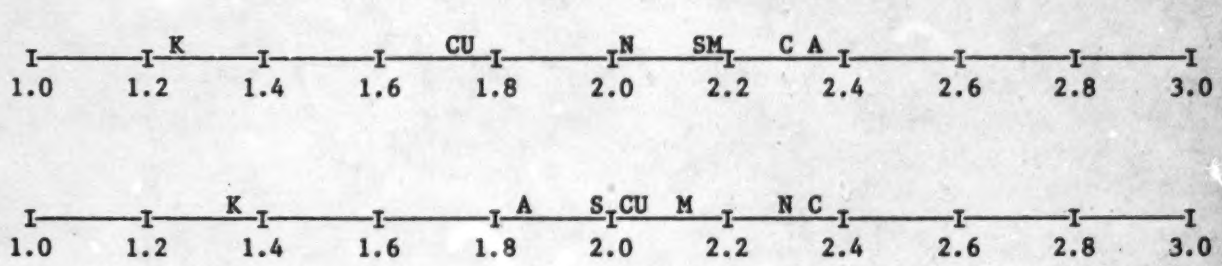


By placing the program services on this scale, it is possible to establish the relative distance between each service in terms of subscriber preference. The results indicate that subscriber interest in a classic film program service is substantially higher than for other program services. Interest in music, news, adult film, and sports program services are all very close in subscriber preference. Interest in cultural programming falls well below the previously mentioned service areas. Finally, interest in children's programming is extremely low relative to the other service options. This chart should provide a good indication of subscriber acceptance of various program services.

To proceed beyond this general scale of program service preferences, identical matrices were compiled for various segments of the subscriber population making it possible to chart the differences in the program preferences of specific audience segments.

First, the program service preferences of HBO subscribers and HBO non-subscribers are substantially different (see Figure 2). Table 2 in the Appendix shows that for HBO subscribers the preference for an adult film channel is highest (61%) with the classic film service ranked second (59%). These services are followed by music, sports, then news. Cultural programming is of substantially less interest, and children's programming is ranked last with a preference rating of 24 percent. By contrast, HBO non-subscribers are most attracted to classic film and news services, followed by music, cultural, sports, and adult film program services. Again, children's programming is of relatively little interest in comparison to the other service options. These differences in program interests are no doubt one of the reasons the current non-subscribers are non-subscribers.

Figure 2.



Rank ordering

	News	Sports	Music	Children's	Cultural	Classic Film	Adult Film
HBO-Subscriber	5	4	3	7	6	2	1
HBO-Non Subscriber	2	5	3	7	4	1	6

Figure 2. Standardized scales of program service preferences for HBO subscribers and non-HBO subscribers and their respective rank orderings.

KEY: A = Adult film
C = Classic film
S = Sports
K = Children's
N = News
M = Music
CU = Cultural

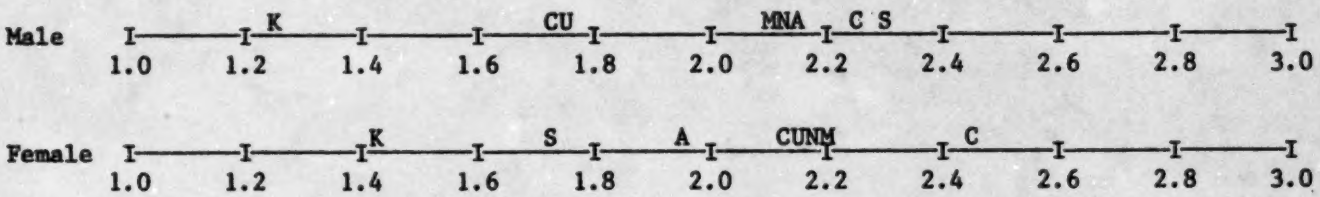
A pay service that featured classic films would likely capture the interest of many cable subscribers not currently attracted to the HBO service, as well as of many HBO subscribers.

Men and women also differ substantially in their program service preferences. (See Tables 4 and 5 in the Appendix). Men would most prefer a sports channel (61%) but not substantially more than classic film adult film, news, and music services. Men are not particularly interested in cultural or children's programming relative to the other service options. Women are most interested in classic film programming (65%). Of somewhat less interest are music, news, and cultural services. Adult film is somewhat lower in preference, followed by sports. Children's programming again, is least preferred. Figure 3 depicts the differences between male and female preferences through the use of a line graph of standardized scores.

A breakdown by age reveals considerable differences in program service preferences. Tables 6 through 9 in the Appendix show the raw proportions associated with each program service pairing and the average proportion associated with each of the seven program services for the four age segmentations. The respondents under twenty-five years of age were most likely to select the music channel over all others with an overall preference proportion of 65 percent. Adult films were ranked second with a preference proportion of 63 percent, followed by classic film, sports, news, and cultural services. As in all other age groups, the children's channel was preferred least (18%).

Table 7 (Appendix) shows the preference proportions for respondents in the 25-34 age group. Classic films were preferred most (66%) with adult

Figure 3.



Rank ordering

	News	Sports	Music	Children's	Cultural	Classic Film	Adult Film
Male	4	1	5	7	6	2	3
Female	3	6	2	7	4	1	5

Figure 3. Standardized scales of program service preferences for male and female cable subscribers and their respective rank orderings.

KEY: A = Adult film
C = Classic film
S = Sports
K = Children's
N = News
M = Music
CU = Cultural

films again ranked second. News, sports, music, and cultural services followed in that order with children's programming again assuming the last position. The 35-54 age group (Table 8, Appendix) also preferred the classic film channel over all others (61%), yet news increased in preference (relative to the younger age groups) to the second most preferred service. Adult films decreased in popularity substantially in the older age group and was ranked fifth. This trend continues in the oldest age group, 55 and above. In this group (Table 9) news was the most preferrred (66%), followed by classic film, music, sports, and cultural services. Adult film service ranked sixth (just above the children's channel) with an overall preference proportion of 37 percent.

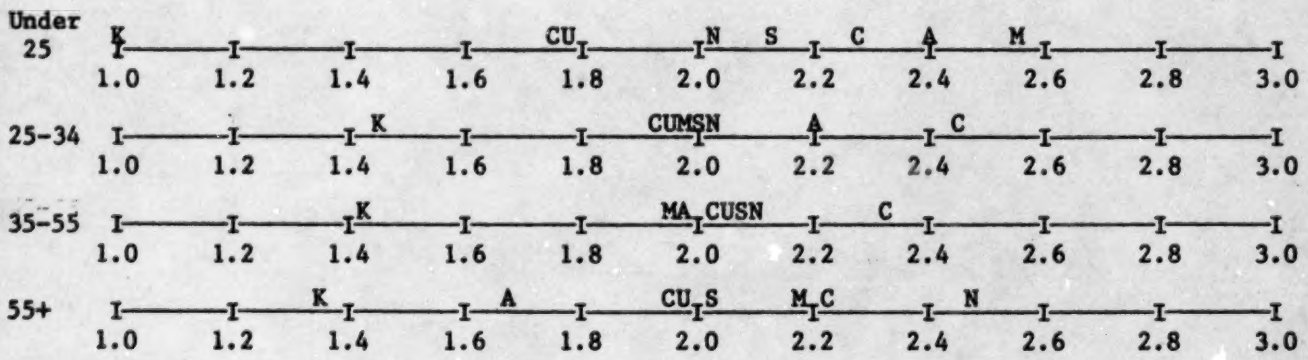
The line graphs in Figure 4 provide a clearer, visual representation of the preference "movement" along age groups. The standardized scales allow one to trace the path of a particular program service across demographic groups. Figure 4 graphically depicts the negative correlation between age and adult film preference and the positive correlation between age and news preference.

Figure 4 reveals another pattern across age groups. The pattern across the first three age groups is one of decreasing discrimination. The preferences of the under 25 group are spread out, suggesting clear preferences. This degree of spread declines as age increases up to 55. After age 55, the preferences again spread out.

The patterns summarized above suggest that the program service preferences in the community sampled vary considerably based on factors such as age, gender, and current involvement with pay services. The one service that seems to be preferred by all groups is the classic film service.

(INSERT TABLE 2 ABOUT HERE)

Figure 4.



Rank ordering

AGE	News	Sports	Music	Children	Cultural	Classic Film	Adult Film
Under 25	5	4	1	7	6	3	2
25-34	3	4	5	7	6	1	2
35-55	2	3	6	7	4	1	5
55+	1	4	3	7	5	2	6

Figure 4. Standardized scales of program service preferences across age groups and the respective rank orderings.

KEY: A = Adult Film N = News
C = Classic Film M = Music
S = Sports CU = Cultural
K = Children's

TABLE 2

MEAN PREFERENCE LEVELS FOR PROGRAM SERVICE AREAS
BY DEMOGRAPHIC CHARACTERISTICS**

	PROGRAM SERVICE AREAS						
	News	Sports	Music	Children's	Cultural	Classic	Adult
Overall	3.13	2.94	3.12	1.193	2.54	3.53	2.97
(Rank)	(2)	(5)	(3)	(7)	(6)	(1)	(4)
HBO Subscriber:							
Yes	2.89*	3.30*	3.31	1.17	2.30	3.51	3.68*
No	3.36	2.60	2.95	1.22	2.75	3.54	2.31
Sex:							
Male	3.21	3.62*	3.14	1.05	2.21*	3.37	3.32*
Female	3.01	2.08	3.18	1.35	3.01	3.82	2.60
Educational Level:							
Some H.S.	2.75	2.06	2.44*	2.19*	2.44*	2.75*	2.06*
H.S. Grad	3.10	3.02	3.22	1.96	1.56	2.96	2.40
Some College	3.12	3.09	3.57	.91	2.12	3.71	3.76
College Grad	2.73	3.33	3.63	.72	2.48	3.48	3.40
Grad Degree	3.42	2.76	2.62	1.29	3.49	3.94	2.56
Age Group:							
Under 25	2.84*	3.29	3.98	.77*	2.27	3.48*	3.88*
25 to 34	3.06	2.90	2.88	1.52	2.73	4.09	3.50
35 to 55	3.24	3.16	2.80	1.41	3.01	3.71	2.84
55 & older	3.52	2.54	2.94	1.12	2.40	3.12	1.71
Children In Home:							
Yes	2.93	3.32	2.53*	2.63*	2.34	3.49	2.99
No	3.17	2.82	3.35	.79	2.58	3.47	3.02

*Statistically significant ($p < .01$) difference in the preferences of the subgroups of this category

**The mean preference level is the average number of times a program type (e.g., news) was selected over the six (6) alternatives. Values can range between zero (0) and six (6).

Another way to examine these data that complements the previous analysis is to look at each service area independently. Table 2 presents the mean preference levels for each program service area. Unlike the previous analysis, these scores are based on the average number of times a program service area was selected over the other six. The demographic segmentation shown in Table 10 can help reveal the specific characteristics associated with differences in preference levels. The analysis shows that interest in news program service is significantly lower among HBO subscribers and among younger subscribers. Interest in sports program service is significantly higher among HBO subscribers and among males. Interest in music program service is significantly related to education in a non-linear fashion. Interest is greatest among subscribers with some college or college degrees and lowest among subscribers with less than high school educations and subscribers with graduate school training. Interest in children's program service is significantly related to education, age, and the presence of children in the household. Interest in cultural program service is significantly greater among women and graduate trained subscribers. Interest in classic film service is significantly greater among better educated subscribers and among subscribers between 25 and 55. Interest in adult film program services is significantly greater among HBO subscribers, subscribers with college or technical school training, and younger subscribers.

Discussion

In the reported study, respondents selected one program service from each of a series of paired-comparisons. It is important to note that this kind of comparative process is not without its own methodological problems.

First, as in any process of concept evaluation, it is impossible to insure that each respondent has the same frame of reference for each program service. Although brief, generic descriptions were provided for each service type, it is feasible that certain services might be interpreted differently by different respondents. This would necessarily affect the comparison process as certain respondents may be comparing different concepts. Second, most program services or types suggest a certain image or connotation. All-news channels are suggestive of social responsibility and political awareness. It may be important for the respondent to present himself as more socially and politically involved than he really is. This may result in an overestimation of interest in all-news channels. The opposite effect may occur for services that connote a degree of social un-desirability, such as adult film program services. However, this approach should be less prone to such bias because of its relative unobtrusiveness. As opposed to absolute approaches that directly and obtrusively ask for preference responses for each entity individually, the comparative approach used in this study allows the respondent to seemingly "conceal" his preferences among many. The paired-comparison technique also measures preference for an entity, not once, but a number of times, each in response to an alternative selection. Certainly the argument presented in this paper is not meant to imply that the paired-comparison technique is the only suitable method to employ in assessing viewer demand. It may be a particularly useful technique when used in conjunction with other complementary approaches. One New Jersey cable company is using three different methods to assess consumer demand for pay services: Bell's Dial-It 900 Service (a service

that allows the viewer to vote "yes" or "no" to any one of a sample of programs), focus groups, and a mail survey (Marks, p. 43). The paired-comparison technique if used in focus groups or mail surveys has the advantage of permitting the researcher to measure the distance between ranked entities. This gives a much more accurate picture of where each service stands in relation to all others offered. Utilizing this technique with a market sementation analysis would further allow the cable operator to provide different tiers of pay service tailored to specific demographic groups and viewer types.

A third consideration is that the paired-comparison technique should be used only when the number of comparisons can be limited to a manageable number. Finally, it should be acknowledged that the decision-making process used by respondents in the paired-comparison method is not isomorphic with the actual decision-making process in daily life. Decisions concerning cable television program services are not typically made in forced choice situations. However, the comparative approach used in this study does not claim to duplicate actual decision-making processes. The intention, moreover, is to get the respondent to systematically evaluate competing program services in order to get closer to identifying true preferences. In this way a comparative approach has great advantages over approaches that require absolute or noncomparative judgments.

Returning to the content of public policy stated in the introduction, the validity and accuracy of this approach can serve as an important asset in developing a community cable franchise ordinance and the comparative evaluation of franchise proposals. With no indicator of subscriber interest, a community's franchise authority cannot formulate a request for proposals with concrete specifications concerning program services. The individual

applicants, therefore, remain free to propose programming of their own choosing. The proposals are thereby the more difficult to rank in terms of community benefit, and no matter who is granted the franchise there is little likelihood of cable programming that suits the community's individual needs. An unreliable subscriber demand analysis is confounding the franchise granting process since applicats typically hire social scientists to publicly dissect weak research supporting competing applications.

The franchise applicant, on the other hand, is also greatly aided by reliable estimates of program demand. Such analysis provides the basis for estimating relative amounts of subscriber revenue from various program networks available for cablecasting, helping to assure or enhance the profitability of the system. In addition, subscriber satisfaction from programming to the surveyed local interests protects the franchise at renewal time.

It is not unusual that a method or procedure of science becomes an important contribution to public health, safety, planning or regulation. In this case, a particular survey technique may directly serve to tailor the selection of cable programming to the particular subscribership.

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APPENDIX

TABLE 2

MATRIX OF PROGRAM SERVICE PREFERENCES

HBO SUBSCRIBERS

Over . . .	Proportion that prefer . . . News	Sports	Music	Children's	Cultural	Classic Film	Adult Film
News	---	.52	.54	.17	.48	.66	.63
Sports	.48	---	.51	.22	.35	.48	.53
Music	.46	.49	---	.22	.30	.48	.58
Children's	.83	.78	.78	---	.71	.85	.83
Cultural	.52	.65	.70	.29	---	.76	.68
Classic Film	.34	.52	.52	.15	.24	---	.57
Adult Film	.37	.47	.42	.17	.32	.43	---
Average Preference	.50	.56	.57	.25	.41	.59	.62
Rank	(5)	(4)	(3)	(7)	(6)	(2)	(1)

TABLE 3

MATRIX OF PROGRAM SERVICE PREFERENCES

HBO NON-SUBSCRIBERS

Over . . .	Proportion that prefer . . .						
	News	Sports	Music	Child-ren's	Cultural	Classic Film	Adult Film
News	---	.37	.37	.16	.47	.52	.39
Sports	.63	---	.56	.31	.51	.60	.46
Music	.63	.44	---	.18	.43	.62	.40
Children's	.84	.69	.82	---	.78	.84	.64
Cultural	.53	.49	.57	.22	---	.67	.40
Classic Film	.48	.40	.38	.16	.33	---	.32
Adult Film	.61	.54	.60	.36	.59	.68	---
Average Preference	.60	.49	.54	.27	.52	.63	.44
Rank	(2)	(5)	(3)	(7)	(4)	(1)	(6)

TABLE 4

MATRIX OF PROGRAM SERVICE PREFERENCES

MALES

Over . . .	Proportion that prefer . . .						
	News	Sports	Music	Children's	Cultural	Classic Film	Adult Film
News	---	.56	.44	.14	.37	.59	.57
Sports	.44	---	.44	.19	.30	.40	.45
Music	.56	.56	---	.20	.32	.53	.52
Children's	.86	.81	.80	---	.74	.85	.80
Cultural	.63	.70	.68	.26	---	.74	.64
Classic Film	.41	.60	.47	.15	.26	--	.52
Adult Film	.43	.55	.47	.20	.36	.48	---
Average Preference	.55	.61	.54	.23	.41	.58	.57
Rank	(4)	(1)	(5)	(7)	(6)	(2)	(3)

TABLE 5

MATRIX OF PROGRAM SERVICE PREFERENCES

FEMALES

Over . . .	Proportion that prefer . . .						
	News	Sports	Music	Children's	Cultural	Classic Film	Adult Film
News	--	.30	.48	.19	.64	.59	.44
Sports	.70	---	.67	.37	.61	.75	.58
Music	.52	.33	---	.21	.41	.59	.44
Children's	.81	.63	.79	---	.76	.84	.64
Cultural	.36	.39	.59	.24	---	.67	.43
Classic Film	.41	.25	.41	.16	.33	---	.34
Adult Film	.56	.42	.56	.36	.57	.66	---
Average Preference	.55	.40	.57	.29	.54	.66	.48
Rank	(3)	(6)	(2)	(7)	(4)	(1)	(5)

TABLE 6

MATRIX OF PROGRAM SERVICE PREFERENCES

AGE: UNDER 25

Over . . .	Proportion that prefer . . .						
	News	Sports	Music	Child-ren's	Cultural	Classic Film	Adult Film
News	---	.55	.68	.08	.47	.61	.69
Sports	.45	---	.57	.22	.38	.46	.56
Music	.32	.43	---	.07	.23	.38	.48
Children's	.92	.78	.93	---	.77	.94	.88
Cultural	.53	.62	.77	.23	---	.78	.72
Classic Film	.39	.54	.62	.06	.22	---	.62
Adult Film	.31	.44	.52	.12	.28	.38	---
Average Preference	.49	.55	.66	.18	.41	.58	.64
Rank	(5)	(4)	(1)	(7)	(6)	(3)	(2)

TABLE 7

MATRIX OF PROGRAM SERVICE PREFERENCES

AGE: 25 TO 34

Over . . .	Proportion that prefer . . .						
	News	Sports	Music	Children's	Cultural	Classic Film	Adult Film
News	---	.47	.40	.20	.51	.74	.57
Sports	.53	---	.53	.30	.47	.61	.60
Music	.60	.47	---	.31	.44	.67	.59
Children's	.80	.70	.69	---	.71	.83	.74
Cultural	.49	.53	.56	.29	---	.79	.56
Classic Film	.26	.39	.33	.17	.21	---	.48
Adult Film	.43	.40	.41	.26	.44	.52	---
Average Preference	.51	.49	.48	.29	.47	.67	.58
Rank	(3)	(4)	(5)	(7)	(6)	(1)	(2)

TABLE 8

MATRIX OF PROGRAM SERVICE PREFERENCES

AGE: 35 TO 54

Over . . .	Proportion that prefer . . .						
	News	Sports	Music	Children's	Cultural	Classic Film	Adult Film
News	---	.43	.38	.25	.53	.55	.49
Sports	.57	---	.45	.28	.43	.54	.41
Music	.62	.55	---	.26	.46	.66	.52
Children's	.75	.72	.74	---	.76	.84	.71
Cultural	.47	.57	.54	.24	---	.59	.47
Classic Film	.45	.46	.34	.16	.41	---	.36
Adult Film	.51	.59	.48	.29	.53	.64	---
Average Preference	.55	.54	.49	.28	.52	.62	.49
Rank	(2)	(3)	(6)	(7)	(4)	(1)	(5)

TABLE 9

MATRIX OF PROGRAM SERVICE PREFERENCES

AGE: 55+

Over . . .	Proportion that prefer . . .						
	News	Sports	Music	Children's	Cultural	Classic Film	Adult Film
News	---	.33	.33	.10	.40	.48	.22
Sports	.67	---	.58	.23	.45	.57	.38
Music	.67	.42	---	.18	.32	.51	.33
Children's	.90	.77	.82	---	.78	.77	.57
Cultural	.60	.55	.68	.22	---	.62	.39
Classic Film	.52	.43	.49	.23	.38	---	.24
Adult Film	.78	.62	.67	.43	.61	.76	---
Average Preference	.66	.52	.58	.27	.49	.60	.37
Rank	(1)	(4)	(3)	(7)	(5)	(2)	(6)